

REMARKS

Claims 2-6, and 14-17 have been cancelled. Claims 1 and 7 have been amended. Claims 18-28 have been added. Claim 1 has been amended to incorporate the limitations of claims 2, 3, 5, and 6 and in addition reciting that the critical element extends into the main cavity from the first section that that support between the second section and the first section is not above the support of the critical element by the first section. This is supported by page 5, lines 3-5, of the application and figure 2, where the upper electrode 126 is the critical element. New independent claim 23 is the same as claim 1, except that claim 23 recites that the second section is supported by the first section only where the first section is supported by the chamber walls.

The Examiner objected to the specification because of informalities on page 2, lines 3-4, of the specification. The specification has been amended accordingly.

The Examiner rejected claims 1-13 under 35 U.S.C. 112, second paragraph, as being indefinite. Regarding claim 1, the Examiner stated that the limitation "the central cavity" should be replaced with "the main cavity". Claim 1 has been amended accordingly. The Examiner also stated that "wherein pocket" should be replaced with "wherein the pocket". Claim 3 has been cancelled.

The Examiner rejected claims 1-3 under 35 U.S.C. 102(e), as being anticipated by Hoog et al., U.S. Patent 4,585,920. Hoog does not disclose that the first section is supported by the chamber walls, as recited in claim 1 as amended. In addition, Hoog does not disclose that the support between the second section and the first section is not above the support of the critical element by the first section, as recited in claim 1 as amended. New claim 23 has the same limitation that the first section be supported by the chamber walls. In addition, claim 23 recites that the second section is supported by the first section only where the first section is supported by the chamber walls. This is not disclosed by Hoog. For at least these reasons, claims 1 and 23 are not anticipated by Hoog.

The Examiner rejected claims 1-5 and 10-13 under 35 U.S.C. 102(b), as being anticipated by Yashima., U.S. Patent 5,685,949. Yamisha does not disclose that the second section is supported by the first section and that the critical element extends from the first section into the main cavity, as recited in claims 1 and 23, as amended. For at least these reasons, claims 1 and 23 are not anticipated by Yashima.

The Examiner rejected claims 1-13 under 35 U.S.C. 102(e), as being anticipated by Hillman., U.S. Patent 5,997,649. Hillman does not disclose that the critical element extends from the first section into the main cavity, as recited in claims 1 and 23, as amended. For at least this reason, claims 1 and 23 are not anticipated by Hillman.

The Examiner rejected claims 1-5 and 10-13 under 35 U.S.C. 102(e), as being anticipated by Sato et al., U.S. Patent 6,199,505 B1. Sato does not disclose that the second section is supported by the first section and that the critical element extends from the first section into the main cavity, as recited in claims 1 and 23, as amended. For at least these reasons, claims 1 and 23 are not anticipated by Sato.

The Examiner rejected claims 6-9 under 35 U.S.C. 103(a), as being unpatentable over Yashima, U.S. Patent 5,685,949 in view of Hillman, U.S. Patent 5,997,649. Neither Yashima nor Hillman discloses that the critical element extends from the first section into the main cavity, as recited in claim 1. Claim 6 has been cancelled. Claims 7-9 ultimately depend on claim 1. For at least these reasons, claims 7-9 are not made obvious by Yashima in view of Hillman.

The Examiner rejected claims 6-9 under 35 U.S.C. 103(a), as being unpatentable over Sato, U.S. Patent 6,199,505 B1 in view of Hillman, U.S. Patent 5,997,649. Neither Sato nor Hillman discloses that the critical element extends from the first section into the main cavity, as recited in claim 1. Claim 6 has been cancelled. Claims 7-9 ultimately depend on claim 1. For at least these reasons, claims 7-9 are not made obvious by Sato in view of Hillman.

Claims 7-13, 18-22 and 24-28 are ultimately dependent on claims 1 and 23, and are therefore respectfully submitted to be patentable over the art of record for at least the reasons set forth above with respect to claims 1 and 23. Additionally, these dependent claims require additional elements that when taken in the context of the claimed invention, further patentably distinguish the art of record. For example, claims 7, 19, 21, and 24 recite that the critical element is an electrode. For at least these reasons, claims 7-13, 18-22 and 24-28 are not anticipated or made obvious by the cited references.

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at telephone number (831) 655-2300.

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CLEAN VERSION OF PARTIAL SPECIFICATION AND ALL PENDING CLAIMS

In the Specification:

Please replace the paragraph located on page 2, lines 3-4, with the following:

A¹ In view of the foregoing, it is desirable to have a vacuum chamber cover that remains flat in vacuum conditions.

In the Claims:

1. (Once Amended) An apparatus, comprising:

a vacuum chamber wall defining a main cavity and an opening;

an exhaust port in fluid connection with the main cavity for establishing a vacuum in the main cavity;

A² a cover for sealing the opening when the cover is supported by the chamber wall, comprising:

a first section adjacent to the main cavity, wherein the first section of the cover is supported by the chamber wall;

a second section on a side of the first section opposite of the main cavity, wherein the second section is supported by the first section; and

a pocket between the first section and the second section, wherein the pocket extends above the region of the first section upon which the critical element is supported; and

a critical element supported by a region of the first section and extending into the main cavity from the first section, wherein the support between the second section and the first section is not above the support of the critical element by the first section.

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

A3 7. (Once Amended) The apparatus, as recited in claim 1, wherein the critical element is an electrode, and further comprising a channel extending from the main cavity to the pocket.

8. The apparatus, as recited in claim 7, further comprising a radio frequency power source electrically connected to the electrode.

9. The apparatus, as recited in claim 8, wherein the cover further comprises a vacuum tight seal between the first section and the second section.

10. The apparatus, as recited in claim 1, further comprising a channel extending between the pocket and the main cavity.

11. The apparatus, as recited in claim 10, wherein the pocket extends substantially across the opening.

12. The apparatus, as recited in claim 11, wherein the cover further comprises a vacuum tight seal between the first section and the second section.

13. The apparatus, as recited in claim 10, wherein the cover further comprises a vacuum tight seal between the first section and the second section.

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (New) The apparatus, as recited in claim 1, wherein the second section is supported by the first section only where the first section is supported by the chamber walls.

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19. (New) The apparatus, as recited in claim 18, wherein the critical element is an electrode.

20. (New) The apparatus, as recited in claim 19, further comprising a radio frequency power source electrically connected to the electrode.

21. (New) The apparatus, as recited in claim 1, wherein the critical element is an electrode.

22. (New) The apparatus, as recited in claim 21, further comprising a radio frequency power source electrically connected to the electrode.

23. (New) An apparatus, comprising:

a vacuum chamber wall defining a main cavity and an opening;

an exhaust port in fluid connection with the main cavity for establishing a vacuum in the main cavity;

a cover for sealing the opening when the cover is supported by the chamber wall,
comprising:

a first section adjacent to the main cavity, wherein the first section of the cover is supported by the chamber wall;

a second section on a side of the first section opposite of the main cavity, wherein the second section is supported by the first section only where the first section is supported by the chamber walls; and

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a pocket between the first section and the second section, wherein the pocket extends above the region of the first section upon which the critical element is supported; and

a critical element supported by a region of the first section and extending into the main cavity from the first section.

24. (New) The apparatus, as recited in claim 23, wherein the critical element is an electrode.

25. (New) The apparatus, as recited in claim 24, further comprising a radio frequency power source electrically connected to the electrode.

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26. (New) The apparatus, as recited in claim 25, further comprising a channel extending between the pocket and the main cavity.

27. (New) The apparatus, as recited in claim 26, wherein the cover further comprises a vacuum tight seal between the first section and the second section.

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28. (New) The apparatus, as recited in claim 23, wherein the cover further comprises a vacuum tight seal between the first section and the second section.